S/081/61/000/021/092/094
B106/203

AUTHORS: Shpilevskaya, I. N., Akhmedov, K. S.

TITLE: Examination of relaxation properties of polyvinyl-chloride gels in chloro benzene and dichloro ethane

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1961, 504, abstract 21R34 (Uzb. khim. zh., no. 3, 1961, 29 - 35)

TEXT: The deformation properties of polyvinyl-chloride gels in dichloro ethane and chloro benzene as a function of their concentration were examined in an apparatus with coaxial cylinders, type Shvedov apparatus. The numerical values of the rigidity modulus (E_1) and the elasticity modulus (E_2), the real relaxation viscosity (η_1) and the viscosity of elastic deformation (η_2), as well as the relaxation periods were calculated. It was shown that with rising concentration of polyvinyl-chloride gels in chloro benzene and dichloro ethane the values of the elasticity-viscosity constants increase. For gels in chloro benzene, this increase is higher than in dichloro ethane. This fact points to a higher intermolecular energy of interaction of the

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S/081/61/000/021/092/094
B106/B203

Examination of relaxation...

molecules of polyvinyl chloride in chloro benzene and to their lower solvation in this solvent. [Abstracter's note: Complete translation.]

Card 2/2

AKHMEDOV, K.S.; SHPILEVSKAYA, I.N.

Temperature influence on the viscosity and mechanical properties of poly (vinyl chloride) solutions. Uzb.khim.zhur. no.4:42-49 '61. (MIRA 14:8)

1. Tashkentskiy gosudarstvennyy universitet V.I.Lenina.
(Ethylene)

S/081/62/000/020/036/040
B144/B101

AUTHORS: Shpilevskaya, I. N., Akhmedov, K. S.

TITLE: Effect of plasticizers on the structural-mechanical properties of polyvinyl chloride gels

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 20, 1962, 590, abstract 20R12 (Uzb. khim. zh., no. 6, 1961, 31-35 [Summary in Uzb.])

TEXT: The effect of plasticizer additions (PL) (0-50%) of dimethyl phthalate and dibutyl phthalate on the viscoelastic properties of 5% gels, and of dimethyl phthalate, diethyl phthalate, dibutyl phthalate and tricresyl phthalate on the shear strength of 8% polyvinyl chloride (PVC) gels in dichloro ethane and chloro benzene is investigated. It is shown that addition of PL to dichloro ethane (a good solvent for PVC) increases the viscoelastic parameters of 5% PVC gels; the shear strength of the 8% gel rises with increasing volume concentrations of PL in the order tricresyl phosphate > dibutyl phthalate > diethyl phthalate > dimethyl phthalate. In PVC gels in chloro benzene (poor solvent for PVC) the

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nature of the PL effect depends on their concentration (additions of $\leqslant$ 10% dibutyl phthalate and of 50% tricresyl phosphate show a gelating effect increasing the viscoelastic characteristics and the shear strength, additions of $\geqslant$ 10% dimethyl phthalate, diethyl phthalate and dibutyl phthalate reduce the above-mentioned parameters). [Abstracter's note: Complete translation.]

Card 2/2

AKHMEDOV, K.S.; SHPILEVSKAYA, I.N.

Structural and mechanical properties of concentrated solutions and gels of polyethylene, polyvinyl chloride, and perchlorovinyl. Vysokom.soe. 5 no.6:914-920 Je '63. (MIRA 16:9)

1.Tashkentskiy gosudarstvennyy universitet im. V.I.Lenina.
(Ethylene polymers)

AKHMEDOV, K.S.; SHPILEVSKAYA, I.N.; MUFAZALOVA, R.S.

Structural and mechanical properties of concentrated solutions of the K-4 preparation in the presence of fillers: alunite, aluminium oxide, and silica gel, and the production of dusts. Nauch.trudy TashGU no.257.Khim.nauki no.12:64-68 '64.

(MIRA 18:8)

SHPILEVSKIY, E.

Conference on the problem of heating homes and public buildings.
Zdrav. Bel. 7 no.5:68 My '61. (MIRA 14:6)
(HEATING--CONGRESSES)

SHPILEVSKIY, V.M.

Temperature conditions in large-panel houses with insulated roofs. Zdrav. Bel. 9 no.6:63-65 Je '63. (MIRA 17:5)

1. Iz kafedry gigiyeny (zaveduyushchiy kafedroy - prof. Z.K. Mogilevchik) Minskogo meditsinskogo instituta.

L 27991-66 EWT(d)/FSS-2

ACC NR: AP6005299 SOURCE CODE: UR/0413/66/000/001/0038/0038

INVENTOR: Shpilevskiy, E. P.

ORG: none

TITLE: A method for error detection and signal erasure in systems with repetition and comparison by elements. Class 21, No. 177469

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 38

TOPIC TAGS: error correction, information processing, data transmission

ABSTRACT: This Author's Certificate introduces a method for error detection and signal erasure in systems with repetition and comparison by elements. Error detection is accomplished without introducing additional redundancy into the original repeated signal by statistical analysis of the received signal in parallel with the usual comparison by elements. This analysis is done by counting the cases where the identical elements of the repeated combination of pulses do not all coincide in polarity. The number of these cases is determined as a function of error probability in the channel and the received signal is erased.

SUB CODE: 09/ SUBM DATE: 20Nov64

UDC: 621.394.181.1

Card 1/1

POIKOLZIN, P.S., kand.tekhn.nauk; LAGUTSEV, A.R., inzh.; NASONOV, A.Ya., inzh.; SHPILEVSKIY, V.A., inzh.

Mechanized timber drawing in roof control in Donets Basin mines. Bezop.truda v prom. 4 no.3:5-7 '60. (MIRA 13:6)

(Donets Basin--Coal mines and mining)

SEMENOV, S.S.; SHPIL'FOGEL', P.V.; ARSHANSKIY, A.M.; SHKLYAYEVA, A.P.

Concentrated shale as an organomineral filler in molded powders of phenolic plastics obtained by the emulsion method. Trudy VNIIT no.10:180-188 '61. (MIRA 15:3)
(Phenol condensation products)(Shale)

YENENKO, O.K.; OZEROV, I.M.; POLOZOV, V.F.; SHPIL'FOGEL', P.V.

Basic properties of the cyclon shale ash of the Central Electric Power station of the "Shale" Combine. Trudy VNIIT no.13:150-161 '64. (MIRA 18:2)

SHPIL'KOV, Ye.M.

Photomicrography with a "FED" camera. Izv.AN Kazakh. SSR Ser.gor. dela, met. i stroimat. no.2:164-169 '54. (MLRA 9:6)
(Photomicrography)

[redacted] V, Ye. M.

"Kinetics of Glass Formation in the Three-Component System Na_2O-CaO-SiO_2." Cand Tech Sci, Inst of Metallurgy and Ore Dressing, Acad Sci Kazakh SSR, Alma-Ata, 1953. (KL, No 10, Mar 55)

So: Sum. No 670, 29 Sept 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

Shpil'rayn, E. M.

15

The mechanism of dissolution of quartz in a silicate melt. O. K. Botvinkin and E. M. Shpil'rayn. *Inest. Akad. Nauk Kazakh. S.S.R., Ser. Geol. Dela, Met., Stroitel'stva i Stroi-materialov.* 1955, No. 10, 46–54 (in Russian).—A study was made of 20 glasses having the following compn.: SiO_2 70–6, CaO 8–14, and Na_2O 10–20%. Quartz grains were from 0.246 to 0.295 mm., and the Na_2CO_3 used was chemically pure. The time of melting was varied according to the chem. compn. from 7 to 80 min. at 1320°. Slides were prepd. from the rapidly cooled melt. Microscopic and x-ray examns. of slides showed that quartz before melting changes first under the effect of temp. into the isotropic metacrystoballite with an n of 1.49. Only a small fraction of quartz changed into trydimite when held over 40 min. at 1320°. The various occlusions, the thermal shock, and isotropic changes weakened the cryst. structure, producing cracks into which entered the liquid phase, leaching out SiO_3 ions which moved outward from the crystals by diffusion. SiO_2 concn. at the crystals was detd. to be 81.2%. The process of dissolution consisted, therefore, of breaking of a quartz grain into smaller particles, followed by colloidal and, finally, mol. dispersion. —R. S. Lubomirski

SHPIL'KOV, E.M.

15

Mechanism of glass formation. O. K. Botvinkin and E. M. Shpil'kov. *Steklo i Keram.* 13, No. 10, 1–5(1956).—The dissoln. process of quartz grains in the batch for 20 ternary (NaCa silicate) glasses (20 g. heated in corundum crucibles at 1320° for 7, 10, 15, 20, and 40 min., then air-quenched) was studied by thin-section methods. The inversion of quartz to cristobalite is excellently observed by the reaction rim structures in the glass melt surrounding the quartz grains. The intermediate formation of cristobalite is essential in the dissoln. mechanism (cf. Kalnarskiĭ and Degtyareva, *C.A.* 49, 7454*f*), as particularly evident in polished sections. The mosaic (defective) structure of the natural quartz crystals is locally much different, and dets., therefore, the widely variable rates of inversion and dissoln. in the glass. From Exin's investigations it is further evident that the dissolved SiO_2 will form complex anions of the type $[Si_xO_y]^{z-}$ in the constitution of the glass, as a function of temp. (cf. Kobeko, 1952). This complexity dets. also the relatively low diffusion rates in the homogenization process of the glass, and of reaching thermodynamic equil. By measurements of n at different distances from the surface of the dissolving quartz or cristobalite grain, a diagram of the SiO_2 concn. as a function of n and distance is shown. The curve shows a smooth decrease in SiO_2 from the satn. concn. (81%) to the final concn. in the glass (74%), reached in a distance of 0.06 mm.

W. Eitel

4E20 3-1

BOTVINKIN, O.K.; SHPIL'KOV, Ye.M.

Kinetics of glass formation in a three-component system Na_2O - CaO - SiO_2. Izv. AN Kazakh. SSR. Ser. gor. dela, met., stroi. i stroimat. no.3:86-102 '57. (MIRA 10:11)
(Glass manufacture--Chemistry)

SHPIL'KOV, Ye.M.

Using vitrophyres in making foamglass. Trudy Inst. stroi. i stroimat. AN Kazakh SSR 2:145-162. '59. (MIRA 12:10)
(Glass, Cellular)

SHPIL'KOV, Ye.M.; SULEYMENOV, S.T.; SKOPINA, V.D.

Effect of calcium and magnesium oxides on the course of obtaining foamglass from vitrophyres. Trudy Inst. stroi. i stroimat. AN Kazakh SSR 2:167-178 '59. (MIRA 12:10)
(Glass, Cellular)

SHPIL'KOV, Ye.M.

Industrial tests of vitrophyre from the Arkharly deposit to obtain cellular glass. Trudy Kazakh. fil. ASia no.2:174-187 '60. (MIRA 15:2)

(Kazakhstan--Porphyry)
(Aggregates(Building materials))

SHPIL'MAN, I.A.

Characteristics of prospecting for buried structures. Geol.nefti i gaza 3 no.1:33-38 Ja '59. (MIRA 12:4)

1. Orenburgskiy sovnarkhoz. (Petroelum geology) (Gas, Natural--Geology)

SHPIL'MAN, I. A., CAND GEOL-MIN SCI, "GEOLOGY, PETROLEUM ~~CONTENT~~ AND METHODS OF PROSPECTING OPERATIONS ON THE EASTERN ~~BORDER~~ OF THE MELEKES DEPRESSION." ORENBURG, 1960. (MAIN ADM OF GEOL AND MINERAL CONSERVATION RSFSR, ORENBURG GEOL ADM). (KL, 3-61, 208).

SHPIL'KO, V.N.

Foregn bodies in the appendix. Sov.med.21 no.4:125 Ap '57.
(MLRA 10:7)

1. Iz Krasnosel'kupskoy rayonnoy bol'nitsy Yamalo-Nenetskogo natsional'nogo okruga.
(APPENDIX (ANATOMY)--FOREIGN BODIES)

SHPIL'KO, V.N.

Endemic nature of congenital dislocation of the hip; preliminary report. Ortop.travm. i protez. 19 no.3:36-39 My-Je '58 (MIRA 11:7)

1. Iz Krasnosel'kupskoy rayonnoy bol'nitsy Yamalo-Nenetskogo natsional'nogo okruga, Tyumenskoy oblasti.
(HIP, disloc.
congen., endemicity (Rus))

SHPIL'KO, V.N.

Helminths in the population of the Taz Basin. Med.paraz. i paraz.bol. 28 no.4:418-421 Jl-Ag '59. (MIRA 12:12)

1. Iz Krasnosel'kupskoy rayonnoy bol'nitsy Yamalo-Nenetskogo natsional'nogo okruga.
(HELMINTHIC DISEASES epidemiology)

SHPIL'KO, V.N.

Foreign bodies in the appendix. Khirurgiia 35 no.12:104-106 D '59. (MIRA 13:6)

1. Iz Krasnosel'kupskoy rayonnoy bol'nitsy Yamalo-Nenetskogo natsional'nogo okruga.
(APPENDIX foreign bodies)

GUTNIK, S., neshtatnyy korrespondent (Kiyev); SHPILLER, V., neshtatnyy korrespondent (Kiyev)

Sever with built-in refrigerator. Mest.prom. i khud.promys. 4 no.3: 13 Mr '63. (MIRA 16:4)

(Refrigerators) (Furniture industry)

RUMANIA/General Division. General Problems. Philosophy. Methodology. A-1

Abs Jour : Ref Zhur-Biologiya, No 20, 1957, 85001

Author : Shpil'man

Inst :

Title : Criticism of "Physiological Idealism" According to the Doctrine of Lenin

Orig Pub : Ocrotirea sanat. R.P.R. 1955, 5, No 3, 84-93

Abstract : Brief review of the history of "Physiological Idealism," as developed in J. Muller's (1801-1858) works under the influence of I. Kant's agnosticism, and its methodological refutation in V.I. Lenin's "Materialism and Empiriocriticism."

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PRITULA, Yu.A.; ABRIKOSOV, I.Kh.; AVROV, P.Ya.; KAZACHENKO, A.A.; KILIGINA, N.I.; KULIKOV, F.S.; MEL'NIKOV, A.M.; TATARINOV, A.G.; TROYEPOL'SKIY, V.I.; TSYPLENKOV, G.G.; SHPIL'MAN, A.I.; DAYEV, G.A., vedushchiy red.; LINDTROP, N.T., red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Volga-Ural oil-bearing region; oil potential] Volgo-Uralskaia neftenosnaia oblast'; neftenosnost'. Leningrad, Gostoptekhizdat, 1957. 175 p. (Leningrad, Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy, no.104). (MIRA 16:8)
(Volga-Ural region--Petroleum geology)

SHPIL'MAN, I.A.

Data on the oil potential of Devonian sediments in the trans-Kama region of the Tatar A.S.S.R. Izv.Kazan.fil.AN SSSR, Ser.geol. nauk no.6:129-139 '57. (MIRA 12:1)
(Kama Valley--Petroleum geology)

MEL'NIKOV, A.M.; SHPIL'MAN, I.A.

Current problems relative to exploratory deep-well drilling in the Tatar A.S.S.R. Geol.nefti 2 no.10:17-24 O '58. (MIRA 11:11)

1. Trest Tatneftegazrazvedka.
(Boring)

SHPIL'MAN, I.A.

Formation of the Bol'shoy Kinel' bank and the outlook for oil and gas prospecting in adjacent areas. Geol. nefti i gaza 3 no.12:9-13 D '59. (MIRA 13:4)

1. Orenburgskiy sovnarkhoz.
(Bolshoy Kinel' Valley--Petroleum geology)
(Bolshoy Kinel' Valley--Gas, Natural--Geology)

SHPIL'MAN, I.A.

Results of geological prospecting in Orenburg Province in 1960 and 1961 and objectives for the coming year. Geol.nefti i gaza 5 no.9:19-25 S '61. (MIRA 14:10)

1. Orenburgskoye geologicheskoye upravleniye.
(Orenburg Province--Petroleum geology)
(Orenburg Province--Gas, Natural--Geology)

KLUBOV, V.A.; KULAKOV, A.I.; SERENKO, M.N.; FOMINA, G.V.; SHPIL'MAN, I.A.

Tectonic pattern of Orenburg Province and adjacent regions in connection with the evaluation of oil and gas potentials. Trudy VNIGNI no.34:5-39 '61. (MIRA 15:7)
(Orenburg Province--Petroleum geology)
(Orenburg Province--Gas, Natural--Geology)

VOROB'YEV, A.A.; MOZHAYEV, N.S.; OVCHARENKO, A.V.; SAVCHENKO, D.A.; SHPIL'MAN, I.A.

Plan for regional prospecting for oil and gas in Orenburg Province. Geol. nefti i gaza 6 no.12:37-41 D '62. (MIRA 15:12)

1. Orenburgskoye geologicheskoye upravleniye i trest Orenburgneftegazrazvedka.
(Orenburg Province—Gas, Natural—Geology)
(Orenburg Province—Petroleum geology)

FOMINA, G.V.; SHPIL'MAN, I.A.; CHEREPAKHIN, S.D.

Petroleum and gas potentials of the Ural Mountain portion of Orenburg Province. Neftegaz. geol. i geofiz. no. 5:3-7 '63. (MIRA 17:5)

1. Orenburgskoye geologicheskoye upravleniye.

BROD, I.O.; BEGISHEV, F.A.; GABRIELYAN, A.G.; OVANESOV, G.P.; SEYFUL'-MULYUKOV, R.B.; SHORNIKOV, B.Ya.; SHPIL'MAN, I.A.; KHANIN, I.L.

Oil and gas potential of the Volga-Ural region, the lower Volga Valley, and the Caspian salt-dome region as parts of the northern Caspian oil- and gas-bearing basin. [Trudy] NILneftegaza no.10:5-16 '63. (MIRA 18:3)

1. Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev otsenki perspektiv neftegazonosonosti; Upravleniya neftyanoy i gazovoy promyshlennosti Verkhne-Volzhskogo i Sredne-Volzhskogo sovetov narodnogo khozyaystva i i Orenburgskoye geologicheskoye upravleniye.

BAGIRYAN, G.V.; SHPIL'MAN, I.A.

Latest prospects for the development of geological prospecting and gas and oil production in Orenburg Province. Geol. i geofiz. no.5:9-13 '64. (MIRA 17:9)

1. Glavnoye upravleniye geologii i okhrany nedr pri Sovete Ministrov RSFSR.

SHPIL'MAN, I.A.

Search for oil and gas pools in deeply buried structures and in zones of local tapering of reservoir beds. Geol.nefti i gaza 9 no.2:31-36 F '65. (MIRA 18:4)

1. Orenburgskoye geologicheskoye upravleniye.

KULAKOV, A.I.; FOMINA, G.V.; SHPIL'MAN, I.A.

Outlook for the development of oil and gas prospecting operations on the eastern slope of the Russian Platform in the area of Orenburg Province. Geol. nefti i gaza 9 no.9:8-12 S '65. (MIRA 18:9)

1. Orenburgneft', Orenburgskoye geologicheskoye upravleniye i Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut, Moskva.

SHPIL'MAN, K.A.

Geology and hydrogeological characteristics of the Sargatskoye area. Mat.po geol. Zap.-Sib.niz. no.3:3-130 '62. (MIRA 16:12)

ZAPIVALOV, Nikolay Petrovich; SHPIL'MAN, Kal'man Abramovich;
GORBATOVSKIY, I.V., red.

[There will be a "Siberian Baku"] Budet sibirskoe Baku.
Novosibirsk, Novosibirskoe knizhnoe izd-vo, 1963. 52 p.
(MIRA 17:3)

ZAKIVANOV, N.P., ROZHOK, N.G.; SHPIL'MAN, K.A.

Oil and gas fields in Tomsk Province. Neftegaz. geol. i geofiz. no.3:8-10 '64. (MIRA 17:5)

1. Novosibirskoye geologicheskoye upravleniye.

SHPIL'MAN, Ye. (Minsk)

"Belarus'-5." Radio no.1:35-37 Ja. '60. (MIRA 13:5)
(Radio--Receivers and reception)
(Television--Receivers and reception)
(Phonograph)

SHPIL'MAN, Yevgeniy Markovich; BUKHMAN, David Romanovich;
TRAVIN, A.A., otv. red.; KONDRAT'YEVA, V.P., red.

["Belarus'-110" television and radio-phonograph console]
Teleradiola "Belarus'-110." Moskva, Sviaz', 1965. 71 p.
(Biblioteka "Televizionnyi priem," no.21) (MIRA 18:11)

SHPIL'OVIY, M.I. [Shpyl'ovyi, M.I.]; ISHCHENKO, Y.O. [Ishchenko, I.O.], inzh.

Give the green light to recent developments. Mekh. sil'. hosp. 14 no.11:6-8 N'63. (MIRA 17:2)

1. Upravlyayushchiy Nemirovskim rayonnym ob"yedineniyem "Sil'gosptekhnika" Vinnitskoy oblasti (for Shpil'oviy).

SHPIL'RAYN E E

USSR/Physical Chemistry - Thermodynamics. Thermochemistry. Equilibrium. Physico-chemical Analysis. Phase Transitions, B-8

1

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 331

Author: Kirillin, V. A., Sheyndlin, A. Ye., and Shpil'rayn, E. E.

Institution: ~~None~~ Moscow Power Eng. Inst.

Title: New Tables of Correlated Values for the Enthalpy and Specific Volume of Steam

Original Periodical: Dokl. AN SSSR, 1955, Vol 105, No 3, 472-475; Teploenergetika, 1956, No 1, 16-21

Abstract: On the basis of experimental data collected over the last few years (chiefly at the All-Union Heat and Power Institute and the Moscow Power Institute) tables of correlated values for the enthalpy and specific volume of steam are presented for pressures up to 500 atm (in steps of 50 atm) and for temperatures up to 650° (in steps of 50°); (the existing tables, adopted in 1934, give values for the enthalpy and specific volume up to 300 atm and 550°, the values in the

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KIRILLIN, Vladimir Alekseyevich; SHEYNDLIN, Aleksandr Yefimovich; SHPIL'RAYN, E.E., redaktor; VORONIN, K.P., tekhnicheskiy redaktor

[Thermodynamics of solutions] Termodinamika rastvorov. Moskva, Gos. izd-vo, 1956. 272 p. (MLRA 9:7)
(Solutions(Chemistry)) (Thermodynamics)

SHPIL'RAYN, E.

2

Špil'rain, È. On problems of the theory of measure. Uspehi Matem. Nauk (N.S.) 1. no 2(12), 179–188 (1946). (Russian)

The author lists 13 unsolved problems most of which concern the existence of measures satisfying various conditions. Two typical such problems are: (1) does there exist a maximal translation invariant extension of Lebesgue measure on the line? and (2) does there exist a finite measure μ on the class of all Borel sets of a nonseparable metric space such that $\mu(E)=0$ whenever E is a separable Borel set?

P. R. Halmos (Chicago, Ill.).

Source: Mathematical Reviews. Vol 10, No. 1

"Problem Relations to the Theory of Measure" M. Reddi Matemat. Vol. 1, No. 2, 1948.

Report M-1113, 27 Sep 51

SHPIL'RAYN, E. E., Engineer

"Experimental Investigation of the Thermodynamic Properties of Liquid Oxygen." Sub 26 Oct 51, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov

Dissertations presented for science and engineering in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

SHPIL'RAYN, E.E., kand. tekhn.nauk; SOLDATENKO, Yu.A., aspirant, red.

[Collection of problems in the thermodynamics of solutions] Sbornik zadach po termodinamike rastvorov. Red. IU.A. Soldatenko. Moskva, Mosk. energ. in-t, 1957. 71 p. (MIRA 11:7)

1. Kafedra inzhenernoy teplofiziki (for Shpil'rayn).
(Solution (Chemistry))

KIRILLIN, Vladimir Alekseyevich; SHEYNDLIN, Aleksandr Yefimovich; SHPIL'RAYN, Eval'd Emil'yevich; NIKOLAYEV, V.V., red.; MEDVEDEV, L.Ya., tekhn.red.

[Engineering problems in thermodynamics] Zadachnik po tekhnicheskoi termodinamike. Izd.2-oe, perer. Moskva, Gos.energ.izd-vo, 1957. 253 p. (MIRA 11:1)
(Thermodynamics--Problems, exercises, etc.)

SHUMYATSKIY, B.Ya., kandidat tekhnicheskikh nauk; SHPIL'RAYN, E.E., kandidat tekhnicheskikh nauk.

Some problems on the thermodynamics of a liquid flow. Teploenergetika 4 no.9:95-96 S '57. (MLRA 10:8)
(Fluid dynamics) (Thermodynamics)

MARGULOVA, T.Kh.,prof., red.; SHPIL'RAYN, E.E.,red.; VORONIN, K.P., tekhn.red.

[Problems of corrosion and heat exchange in liquid metals. Translation from American and British sources] Nekotorye voprosy korrozii i teploobmena v zhidkikh metallakh. Moskva, Gos. energ.izd-vo, 1958. 39 p. (MIRA 11:9)

(Corrosion and anticorrosives)
(Heat--Transmission)
(Liquid metals)

SOV/96-58-7-4/22

AUTHOR: Sheyndlin, A.Ye., Dr.Tech.Sci.; Shpilrayn, E.E., Cand.Tech.Sci. and Sychev, V.V., Engineer.

TITLE: The specific heat at constant pressure c_p of steam at the saturation line (Teployemkost' c_p vodyanogo para na linii nasyshcheniya)

PERIODICAL: Teploenergetika, 1958, No.7, pp. 13-17 (USSR)

ABSTRACT: The enthalpy of supersaturated steam is best calculated by integrating values of c_p on isobars from the saturation curve to the temperature at which the enthalpy is to be determined. However, as it is very difficult to determine c_p near the saturation curve, values are usually obtained by extrapolation, but this procedure is unreliable near the critical pressure. The authors, therefore, decided to calculate the c_p of steam at the saturation line by a method basically independent of experimental determinations of c_p for superheated steam. An equation is then written for the specific heat of steam at the saturation line; it includes terms for the specific heat of water at the saturation line at the same temperature, the latent heat of steam and its differential with respect to temperature, the specific volumes of dry saturated steam and water on the saturation line, and their partial differential with respect to temperature at constant pressure. This equation forms the basis of all the calculations. In using it, a large number of calorific and thermal data for water and steam have to be determined, but these determinations can all be made more accurately than direct

Card 1/3

The specific heat at constant pressure c_p of steam at the saturation line.

determination of c_p near the saturation line. The calorific and thermal data used in the present calculations are given in Table.1. The method of calculating each of the terms of the equation is then explained. Graphs of differentials of latent heat of steam, specific volume of steam and of water are given in Figs.1., 2., and 3. The accuracy of the calculations was evaluated by the methods of the theory of errors. The accuracy of determination of the differentials was determined by an indirect method. The errors in each of the terms are then evaluated numerically and finally it is stated that the overall error in the determination of c_p did not usually exceed 1 - 1.5%. The error is somewhat greater near the critical region. Calculated values of c_p from 170 - 380°C are displayed in Table.2, which also gives values recommended by the All-Union Thermotechnical Institute and percentage differences between the two sets of values. The calculated values are then compared with experimental values of several authors and a number of differences are found to exist which exceed the errors of calculation or of experiment in some regions. Further theoretical and practical investigations in these regions are

The specific heat at constant pressure c_p of steam at the saturation line.

required to establish the reasons for the differences.
There are 5 figures, 2 tables, 16 literature references
(4 Soviet, 7 English and 5 German)

ASSOCIATION: Moskovskiy Energeticheskiy Institut (Moscow Power Institute)

1. Steam - Specific heat 2. Steam - Enthalpy 3. Steam - Pressure factors

SAMUYLOV, Ye.V., kand.fiz.-matem.nauk, red.; SHPIL'RAYN, E.E., kand. tekhn.nauk, red.; SAMSONOV, V.G., red.; SMIRNOVA, N., tekhn.red.; REZOUKHOVA, A., tekhn.red.

[Motion of the nose section of long-range rockets; collected articles] Problemy dvizheniia golovnoi chasti raket dal'nego deistviia; sbornik statei. Moskva, Izd-vo inostr.lit-ry, 1959. 488 p. (MIRA 13:5)

(Rockets (Aeronautics))

ORLOV, A.A., kand.fiz.-matemat.nauk, red.; SHPIL'RAYN, E.E., kand.tekhn. nauk, red.; VLASOV, V.T., red.; IOVLEVA, N.A., tekhn.red.

[Scientific problems connected with artificial satellites; collection of articles] Nauchnye problemy iskusstvennykh sputnikov; sbornik statei. Moskva, Izd-vo inostr.lit-ry, 1959. 528 p. (MIRA 12:12)

(Artificial satellites)

05280
10(5) SOV/170-59-7-11/20

AUTHORS: Sheyndlin, A.Ye., Shpil'rayn, E.E., Sychev, V.V.

TITLE: On the Heat Capacity C_p of Water and Water Vapor at Supercritical Pressures

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 7, pp 75 - 79 (USSR)

ABSTRACT: There are several methods for working out graphs expressing relationships between heat capacity C_p and various factors. Ya. Havlíček and L. Miskovskiy [Ref 9] proposed a method for analyzing experimental data on C_p by plotting the lines C_p = const in the coordinate system p - T. This method, as well as other existing methods, possesses some intrinsic drawbacks. The authors have worked out a new method which is based on the coordinate system: $\frac{1}{C_p}$ versus p. This graph is shown on Figure 3 which is plotted by isochores. This made it possible (after smoothing the isochores) to obtain from this graph isobars of C_p as functions of V. Then the values of T are found from the v - T graph, and the smoothed data are plotted in the C_p - T graph by isobars. The values of C_p corresponding to the round values of pressure are then obtained from these isobars and compiled into a table presented in the paper. This method was employed for analyzing the available experimental data on heat capacity C_p of water

Card 1/2

SHEYNDLIN, A.Ye., doktor tekhn. nauk; SHPIL'RAYN, E.E., kand. tekhn. nauk; SYCHEV, V.V., inzh.

Reference values of the specific heat of steam. Teploenergetika 6 no.12:80-83 D '59. (MIRA 13:3)

1.Moskovskiy energeticheskiy institut.
(Steam)

S/096/60/000/010/016/022
E194/E135

11,4100

AUTHORS: Shpil'rayn, E.E., Fabrikant, V.A., Fedorova, I.P., Rumyantsev, A.M., and Detlaf, A.A.

TITLE: Calculation of the Specific Heat of Alkaline Metal Vapours

PERIODICAL: Teploenergetika, 1960, No 10, p 95

VB.

TEXT: Calculated values are given for the specific heat at constant pressure of vapours of alkaline metals and the thermodynamic functions are calculated. (Enthalpy, isobar-isothermal potential) of monoatomic and biatomic vapours in the temperature range 500 to 3500 °K for the ideal gas conditions. In determining the specific heat of monoatomic and biatomic vapours only the lower electronic level was taken into account; in calculating the static sums of biatomic vapour molecular oscillations and flexibility were allowed for. On this basis calculations were made of the constants of equilibrium and degree of dissociation of biatomic vapours of alkali metals as functions of temperature and pressure. In addition, the calculations were made in the above mentioned

Card 1/2

S/096/60/000/010/016/022
E194/E135

Calculation of the Specific Heat of Alkaline Metal Vapours

temperature range of the specific heat of a reacting mixture of monoatomic and biatomic vapours both on the saturation line and in the superheated vapour region.

ASSOCIATION: Moskovskiy energeticheskiy institut
(Moscow Power Institute)

Card 2/2

VB

SHEYNDLIN, A.Ye., doktor tekhn.nauk, SHPIL'RAYN, E.E., kand.tekhn. nauk; SYCHEV, V.V., inzh.

Heat capacity C_p of water and steam at the saturation line. Teploenergetika 7 no.7:23-27 Jl '60. (MIRA 13:7)

1. Moskovskiy energeticheskiy institut.
(Heat capacity)
(Water--Thermal properties)

88624
S/170/61/004/002/002/015
B019/B060

11.3950
11.4100

AUTHORS: Shpil'rayn, E. E., Asinovskiy, E. I.

TITLE: Calculation of the Thermodynamic Properties and the Construction of the is-Diagram of Alkali Metals

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1961, Vol. 4, No. 2, pp. 18-26

TEXT: In view of the relatively scarce data available on the thermodynamic properties of alkali metals the authors calculated the thermodynamic functions and set up the is-diagram. The following assumptions were made: critical parameters for sodium p_{cr} = 355 kg/cm^2, T_{cr} = (2750-3300)°K, γ_{cr} = 2270°K, for lithium p_{cr} = (1400-1500) kg/cm^2, T_{cr} = (2750-3300)°K, γ_{cr} = (0.14-0.15) g/cm^3. These values permit the assumption that the vapors of alkali metals satisfy the equation of state of ideal gases. The volume of liquid metals was taken to be independent of pressure, while enthalpy and enthropy were estimated as functions of pressure according to well-known thermodynamic relations. Moreover, the thermodynamic functions of the liquid phases were

Card 1/3

88624

Calculation of the Thermodynamic Properties and the Construction of the is-Diagram of Alkali Metals

S/170/61/004/002/002/018
B019/B060

of the isotherms and isobars of overheated vapor also changes. There are 2 figures and 24 references: 9 Soviet, 11 US, and 2 German.

ASSOCIATION: Energeticheskiy institut, g. Moskva (Institute of Power Engineering, Moscow)

SUBMITTED: September 20, 1960

Card 3/3

Calculation of the latent ...

oration heat of alkalies are incorrect because dimerization has not been taken into account. For lithium, sodium, and potassium, the following correct values are given:

	Atomic weight	Molar evaporation heat, kcal/mole	Specific evaporation heat, kcal/kg
Li	6,940	36,3	4636
Na	22,991	24,1	926
K	39,100	19,5	473

These values hold for the boiling point of the individual metals. There are 1 table and 16 references: 5 Soviet and 11 non-Soviet. The four most recent references to English-language publications read as follows: K. K. Kelley, Bur. of Mines., Bull. 383, Washington, 1935; L. Quill, The chemistry and metallurgy of miscellaneous materials, 1950; R. Lyon, Handbook on Liquid Metals Suppl., Washington, 1950; W. H. Evans et al., J. Res. Nat. Bur. Stand., 55, 83, 1955.

ASSOCIATION: Laboratoriya vysokikh temperatur AN SSSR, g. Moskva (Laboratory of High Temperatures AS USSR, Moscow)

SHPIL'RAYN, E.E.; STEFANOV, B.I.

Apropos of L.A. Brovkin's article "Effect of an increase in the measurable mean temperature and the heat content of certain insulated bodies in the process of temperature balancing. Inzh.-fiz. zhur. 5 no.6:126-131 Je '62. (MIRA 15:12)
(Temperature--Measurement)
(Enthalpy)
(Brovkin, L.A.)

KAZAVCHINSKIY, Ya.Z., prof.; KESSEL'MAN, P.M., kand. tekhn. nauk; KIRILLIN, V.A., akademik; RIVKIN, S.L., kand. tekhn. nauk; SYCHEV, V.V., kand. tekhn. nauk; TIMROT, D.L., prof.; SHEYNDLIN, A.Ye., prof.; SHPIL'RAYN, E.E., dots.; BUL'DYAYEV, N.A., tekhn. red.

[Heavy water; its thermophysical properties] Tiazhelaia voda; Teplofizicheskie svoistva. Moskva, Gosenergoizdat, 1963. 255 p. (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut vysokikh temperatur pri Moskovskom energeticheskom institute (for Kirillin, Sychev, Timrot, Sheyndlin, Shpil'rayn). 2. Vsesoyuznyy nauchno-issledovatel'skiy teplotekhnicheskiy institut imeni F.E. Dzerzhinskogo (for Rivkin). 3. Odesskiy institut inzhenerov morskogo flota (for Kazavchinskiy). 4. Odesskiy tekhnologicheskiy institut (for Kessel'man).

L 10753-63 EPF(c)/EWP(q)/EWT(m)/BDS--AFFTC/ASD--Pr-4--JD/JW

ACCESSION NR: AP3003051 S/0170/63/000/006/0074/0077

AUTHOR: Shpil'rayn, E. E.; Zvereva, A. M.

TITLE: Experimental assembly for studying vapor pressures of alkali metals at high temperatures

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 6, 1963, 74-77

TOPIC TAGS: alkali-metal vapor pressures, high temperatures

ABSTRACT: An instrument consisting primarily of a U-shaped tube was developed for determining the vapor pressures of alkali metals at high temperatures. The steel left leg is closed and electrically heated; the glass right leg is connected to a pressure gauge and to a system for metered injection or withdrawal of argon. The tube is evacuated to 10^{-1} newton/m^2, the metal specimen is injected through a valve, and the steel leg is heated to the desired temperature. During temperature equalization, the glass leg is maintained under argon at a

Card 1/2

L 10753-63

ACCESSION NR: AP3003051

pressure higher than the vapor pressure so that the steel leg is entirely filled but the level in the glass leg reaches to only about one-third of the leg. After temperature equalization the argon pressure is gradually lowered until a stepwise increase of the level in the glass leg is observed. The pressure-gauge reading at this point corresponds to the vapor pressure. The instrument was used for determining the vapor pressure of Na at 900—1300K. Scattering of the experimental points did not exceed 2.5×10^2 newton/m^2. If the metal leg is made of a high-melting alloy, the instrument can also be used for determining vapor pressures at higher temperatures. Orig. art. has: 2 figures.

ASSOCIATION: Institut vy*sokikh temperatur pri MEI, Moscow (High Temperature Institute, MEI)

SUBMITTED: 21Jan63 DATE ACQ: 22Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 000 OTHER: 002

Card 2/2

ACCESSION NR: AP4004136 S/0294/63/001/002/0173/0176

AUTHORS: Shpil'rayn, E. E.; Yakimovich, K. A.

TITLE: Experimental installation for determining the density of liquid metals

SOURCE: Teplofizika vy*sokikh temperatur, v. 1, no. 2, 1963, 173-176

TOPIC TAGS: liquid metal, density, liquid metal density, specific weight, high temperature, dilatometric method, pycnometric method, physical property, heat transfer fluid, heat transfer, pycnometry, dilatometry, liquid metal density, liquid metal specific gravity, specific gravity

ABSTRACT: In view of the advantages of the pycnometric method over other known methods for determining the density of liquid metals at high temperatures and in view of the methodological difficulties in-

Card 1/43

ACCESSION NR: AP4004136

ASSOCIATION: Nauchno-issledovatel'skiy institut vy*sokikh temperatur (Scientific Research Institute of High Temperatures)

SUBMITTED: 28Jun63	DATE ACQ: 26Dec63	ENCL: 01
DATE ACQ: 26Dec63	NO REF SOV: 006	OTHER: 000

Card 3/3

ACCESSION NR: AP4044521

outer sample diameters. For a narrow temperature difference a corresponding expression was developed. The analytical basis of the method proposed involves measuring the effective radiation coefficients for the sample and an outer protective screen. Optical pyrometer OP-48 was used for temperature measurement, and electrical means were employed to measure heat flow; straightening strain was measured by means of the low-resistance potentiometer PMS-48. Experimental relative errors were on the order of 11 to 18%. It was noted that the source of largest error lay in temperature measurement. Experimental data were plotted and results obtained by both large and small temperature gap formulae were compared. A schematic diagram of the test apparatus is shown. Orig. art. has: 5 figures and 6 equations.

ASSOCIATION: Nauchno-issledovatel'skiy institut vy*sokikh temperatur (Scientific Research Institute of High Temperatures)

SUBMITTED: 26Apr64 ENCL: 00

SUB CODE: TD NO REF SOV: 007 OTHER: 016

Card 2/2

L 45630-65

ACCESSION NR: AP5006471

also that the main premises of the electron theory of solids can be extended to include the liquid state of metals. Specific calculations are made for the additional resistances due to admixture of sodium and potassium in liquid lithium. Orig. art. has: 2 figures, 5 formulas, and 2 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut vysokikh temperatur (Scientific Research Institute of High Temperatures)

SUBMITTED: 04Jul64 ENCL: 00 SUB CODE: EM, MM

NR REF SOV: 003 OTHER: 010

Card 2/2

L 4522-66 EWT(l)/EPA(s)-2/EWT(m)/EPA(sp)-2/EPF(c)/EPF(n)-2/EWP(c)/EWA (d)/EPA(w)-2

ACC NR: AP5025992 FCS(f)/T-2/EWP(t) SOURCE CODE: UR/0294/65/003/005/0757/0764
EWP(b)/EWA(m)-2 IJP(c) JD/WW/JG/DJ/AT

AUTHOR: Shpil'rayn, E. E.; Yakimovich, K. A.

ORG: Scientific Research Institute of High Temperatures (Nauchno-issledovatel'skiy institut vysokikh temperatur)

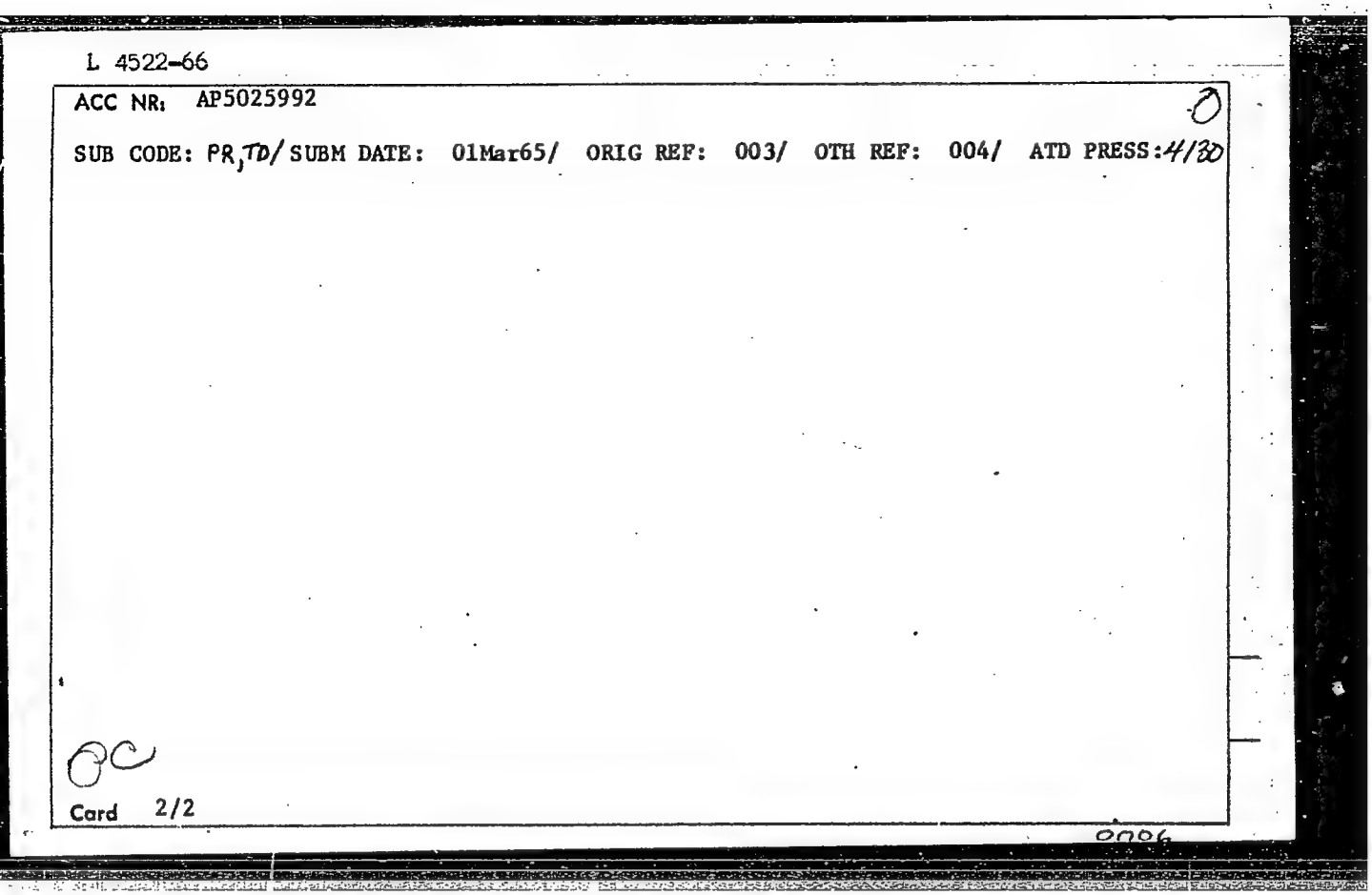
TITLE: Thermodynamics of an MHD power generator with a vapor-fluid injector

SOURCE: Teplofizika vysokikh temperatur, v. 3, no. 5, 1965, 757-764

TOPIC TAGS: magnetohydrodynamics, MHD power generator, liquid metal fluid, energy conversion

ABSTRACT: The thermodynamics of a vapor-fluid injector have been analytically investigated under the assumptions that 1) the whole injector as well as its separate parts are adiabatic; 2) the processes in the nozzle and in the exit cone are not isentropic; and 3) the nonisentropy of the processes in the mixing chamber is determined only by losses due to mixing. The formulas obtained show that the efficiency of the injector and also of the whole device depends on the ratio of the available enthalpy of the flowing fluid to the value of the latent heat of vaporization of the working material. Since calculations show that this ratio is not favorable for otherwise suitable materials, it is suggested that the efficiency of the device could be substantially increased by the use of two-component injectors. Orig. art. has: 26 formulas and 7 figures. [ZL]

Card 1/2 UDC: 621.313.12:538.4:531.41



L 4522-66

ACC NR: AP5025992

SUB CODE: PR,TD/ SUBM DATE: 01Mar65/ ORIG REF: 003/ OTH REF: 004/ ATD PRESS: 4/30

Card 2/2

0006

L 35658-66 EWT(1)
ACC NR: AP6014080 SOURCE CODE: UR/0294/66/004/002/0292/0293

AUTHOR: Shpil'rayn, E. E. 42 B

ORG: High Temperature Scientific Research Institute (Nauchno-issledovatel'skiy institut vysokikh temperatur) 2/

TITLE: A thermodynamic method for determining the heat of dissociation of gases 2/

SOURCE: Teplofizika vysokikh temperatur, v. 4, no. 2, 1966, 292-293

TOPIC TAGS: gas dissociation, thermodynamic analysis, heat of dissociation

ABSTRACT: It is assumed that the dissociated gas is sufficiently broken up that it can be considered as a mixture of ideal gases. Then, the degree of its dissociation, α, and a given pressure, p, and temperature, T, is determined by the equation:

$$\ln K_p = \ln p \frac{4\alpha^2}{1-\alpha^2} = -\frac{\Delta\Phi^{\circ\circ}(T)}{\mu RT} \quad (1)$$

Here

$$\Delta\Phi^{\circ\circ}(T) = 2[\Phi_i^\circ(T) - I_i^\circ(0)] - [\Phi_z^\circ(T) - I_z^\circ(0)] + Q_p^{diss}(0) \quad (2)$$

UDC: 539.196.6:536.423.15

Card 1/2

SAVCHENKO, Z.I.; SHPIL'REYN, M.I.

Effect of aminazine on the central nervous system according to data of biochemical studies. Trudy 1-go MMI 34:541-547 '64.
(MIRA 18:11)

1. Kafedra psikhiatrii (zav. - zasluzhennyy deyatel' nauki prof. V.M. Banshchikov), laboratoriya patokhimii mozga (zav. - doktor biolog. nauk K.I. Pogodayev) 1-go Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.

Shpinar, I. I.

KUZNETSOV, Boris Vasil'yevich; SHPINAR, Ivan Ivanovich; SOLOV'YEV, N.I., retsenzent; KHOKHRYAKOV, G.B., retsenzent; TATISHCHEV, V.I., kandidat tekhnicheskikh nauk, redaktor; SHIMANNIKOVA, Z.V., redaktor izdatel'stva; KRASNAYA, A.K., tekhnicheskiy redaktor

[Parts of ship machinery] Detali sudovykh mashin. Pod red. V.I. Tatishcheva. Moskva, Izd-vo "Rechnoi transport," 1957. 471 p. (MIRA 10:9)
(Marine engineering)

SHPINCHEVSKIY, F.

Using unified tariffs in city motorbus transportation.
Avt. transp. 37 no.5:10 My '59. (MIRA 12:8)

1.Starshiy ekonomist Semopalatinskoy avtobazy No.1.
(Motorbus lines--Fares)

SHPINDLER, D.L.

Shpindler, D.L. "The influence of the 'siliceous fire' on the motor, secretory, and excretory functions of the dog's stomach", Vestnik Akad. nauk Kazakh. SSR, 1948, No. 11, p. 57-64, (Resume in Kazakh), -Bibligo: 16 items.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

SHPINDLER, D.L.

Influence of silicon dust on motor, secretory, and excretory functions of the stomach in a dog. Izv.AN Kazakh.SSR.Ser.promgig.i profzab. no.1:70-85 '49. (MLRA 9:5)
(Silicon--Toxicology) (Stomach)

SHPINDLER, D.L.; GORDIN, M.N.

Effect of cholagogues on the milk and butterfat yield of cows. Uch. zap. Kazakh. un. 41:186-187 '61. (MIRA 16:6)
(CHOLAGOGUES) (DAIRY CATTLE—FEEDING AND FEEDS)

KOLBASOVA, V.K.; LYAMINA, V.P., starshiy nauchnyy sotrud.; MAKAROV, A.S.; SHEPELEVA, N.A., starshiy nauchnyy sotrud.; SHPINDLER, M.A., kand. ekon. nauk, red.; BELOV, M., red.; TROPINOVA, Z., tekhn. red.

[Workers' control and nationalization of the industry in the Kostroma Government; collection of documents, 1917-1919] Rabochii kontrol' i natsionalizatsiia promyshlennosti v Kostromskoi gubernii; sbornik dokumentov, 1917-1919 gg. Kostroma, Kostromskoe knizhnoe izd-vo, 1960. 223 p. (MIRA 14:5)

1. Kostroma (Province) Upravleniye vnutrennikh del. Arkhivnyy otdel. 2. Nachal'nik Gosudarstvennogo arkhiva Kostromskoy oblasti (for Kolbasov) 3. Nachal'nik Arkhivnogo otdela Upravleniya vnutrennikh del Kostromskogo oblispolkoma (for Makarov) 4. Arkhivnyy otdel Upravleniya vnutrennikh del Kostromskogo oblispolkoma (for Shepeleva, Lyamina)
(Kostroma Province--Works councils)
(Kostroma Province--Industries)

L 20785-66 EPF(n)-2/EWP(k)/EWT(m)/ETC(m)-6/T/EWA(d)/EWP(w)/EWP(v)/EWP(t) IJP(c)

ACC NR: AP6005747 EM/JD/JG SOURCE CODE: UR/0128/65/000/010/0027/0031

AUTHOR: Nekhendzi, Yu. A. (Doctor of technical sciences); Shpindler, S. S. (Engineer)

ORG: none

TITLE: On the theory of the alloying and composition of heat-resistant steels for highly stressed cast turbine blades

SOURCE: Liteynoye proizvodstvo, no. 10, 1965, 27-31

TOPIC TAGS: high alloy steel, turbine blade, metal casting, cooling, austenite, ferrite, high temperature strength

ABSTRACT: Austenitic steels of the Fe-Cr-Ni system containing various amounts of Cr and Ni, e.g. 20/10, 15/15, 20/20, 15/35, etc., additionally treated with Mo, W, Nb, Ti, Al, and other alloy elements which dissolve in the austenite and form hardening phases (carbides, carbonitrides, intermetallides), are widely used in industry for the temperatures 600-750°C. In this connection, and since the cooling rate of castings of Cr-Ni steel greatly affects their phase structure and particularly the formation of ferrite, the author describes new structural diagrams specially developed for high-alloy steels of the Fe-Cr-Ni system as a function of the cooling rates of thin-walled castings of the gas-turbine-blade type, usually produced by the lost-wax process with pouring into ceramic molds heated to 800°C. In addition, formulas quantitatively re-

Card 1/2 UDC: 669.14.018.44-14

L 28756-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

ACCESSION NR: AP5004375 S/0056/65/048/001/0069/0071

33
29B

AUTHOR: Shpine;', V. S.; Aleksandrov, A. Yu.; Ryasnyy, G. K.; Okhlobystin, O. Yu.

TITLE: Asymmetry of the doublet in Mossbauer resonance absorption spectra of some organic compounds of tin

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 1, 1965, 69-71

TOPIC TAGS: tin, Mossbauer effect, asymmetry, line width, doublet splitting

ABSTRACT: The asymmetry of the doublet in the resonance absorption spectrum of $(C_6H_5)_2SnCl_4$, noted first by Bryukhanov et al. (ZhETF v. 43, 448, 1962), is considered. Various experiments carried out to find the cause of this asymmetry in a polycrystalline sample are described. The measurements were made with constant-velocity apparatus, using a source of Sn^{119} in the form of SnO_2 and Mg_2Sn. The gamma quanta were detected by a standard scintillation method using a resonant counter. The spectra obtained upon application of a magnetic field to the absorber showed that the doublet structure is actually due to quadrupole interaction. NMR magnetic measurements of this compound, made by I. F. Shchegolev of the In-

Card 1/2

L 28756-65

ACCESSION NR: AP5004375

4

stitut fizicheskikh probem (Institute of Physical Problems) AN SSSR, have shown that there are no regions with unpaired spins in this molecule, and that the asymmetry of the doublet has no magnetic origin. Later investigations have established that after careful purification and recrystallization of the sample, carried out at Institut elementoorganicheskikh soyedineniy (Institute of Organoelemental Compounds) AN SSSR, the resonance absorption spectrum became a symmetrical doublet. It is concluded from the results that some tin-organic fractions are present in this compound and that the spectrum is the result of superposition of the two spectra, of $(C_2H_4)_2SnCl_2$ and $(C_6H_5)_2SnCl_2 \cdot nH_2O$. The asymmetry is obtained when the components near zero velocity coincide while the other two are shifted somewhat relative to each other. "We thank I. F. Shchegolev for the NMR measurements." Orig. art. has: 1 figure.

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Institute of Nuclear Physics, Moscow State University)

SUBMITTED: 03Jul64 ENCL: 00 SUB CODE: NP, IC

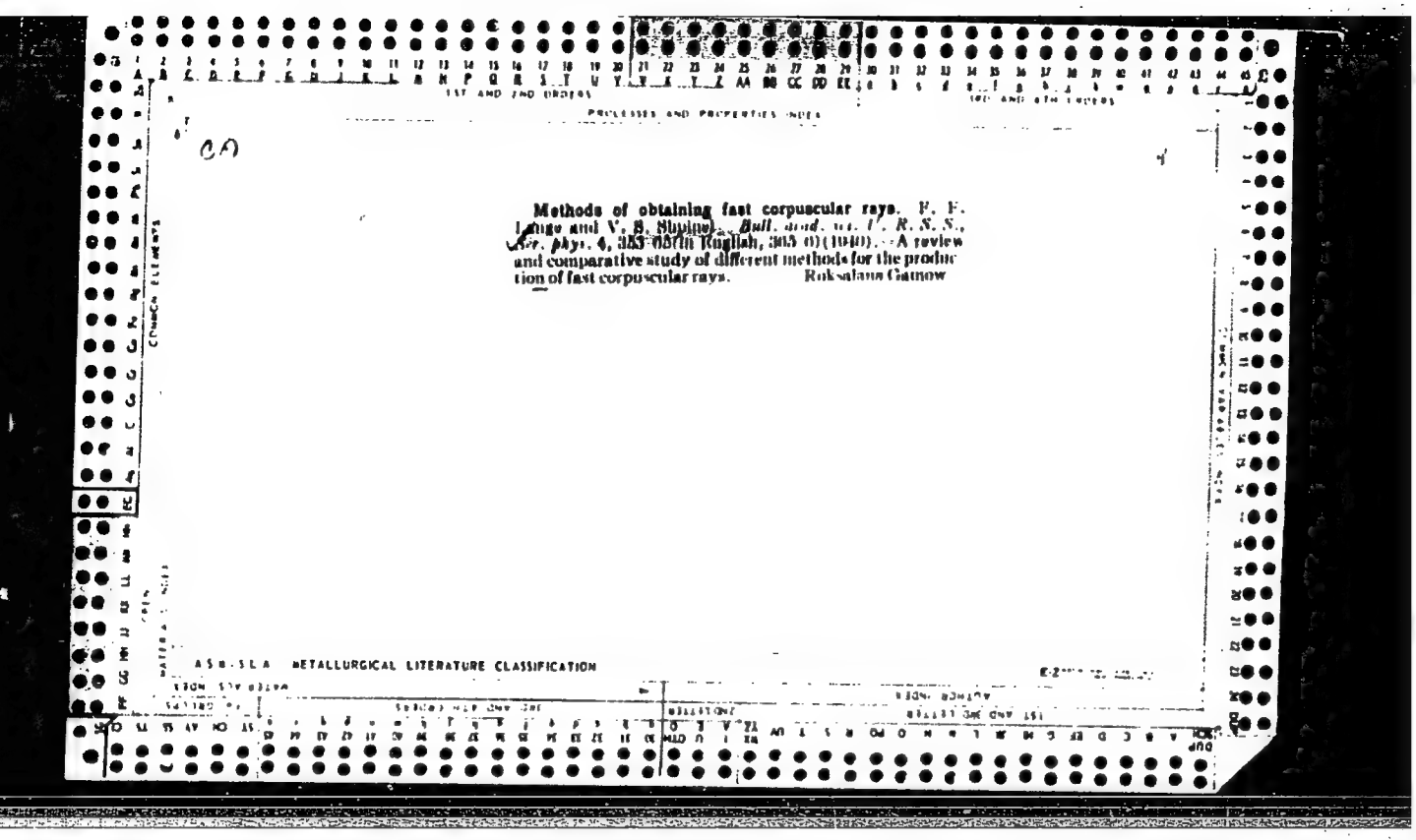
NR REF SOV: 004 OTHER: 000

Card 2/2

SHPINEL', G.M.

Organizing blood transfusion under polyclinic conditions. Vrach. delo no. 3:115-117 Mr '61. (MIRA 14:4)

1. Poliklinicheskoye otdeleniye Chetvertoy L'vovskoy gorodskoy bol'nitsy (nauchnyy rukovoditel' - prof. I.I. Fedorov).
(BLOOD--TRANSFUSION)



Methods of obtaining fast corpuscular rays. F. F. Lange and V. S. Shpinel'. *Bull. Acad. Sci. U. R. S. S., Ser. Phys.* 4, 283-305 (in English, 305-6) (1940). A review and comparative study of different methods for the production of fast corpuscular rays. Roksalana Gamow

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION

[illegible], V. S.

USSR/Geiger-Mueller Counters Nov 1946
X-rays - Measurements

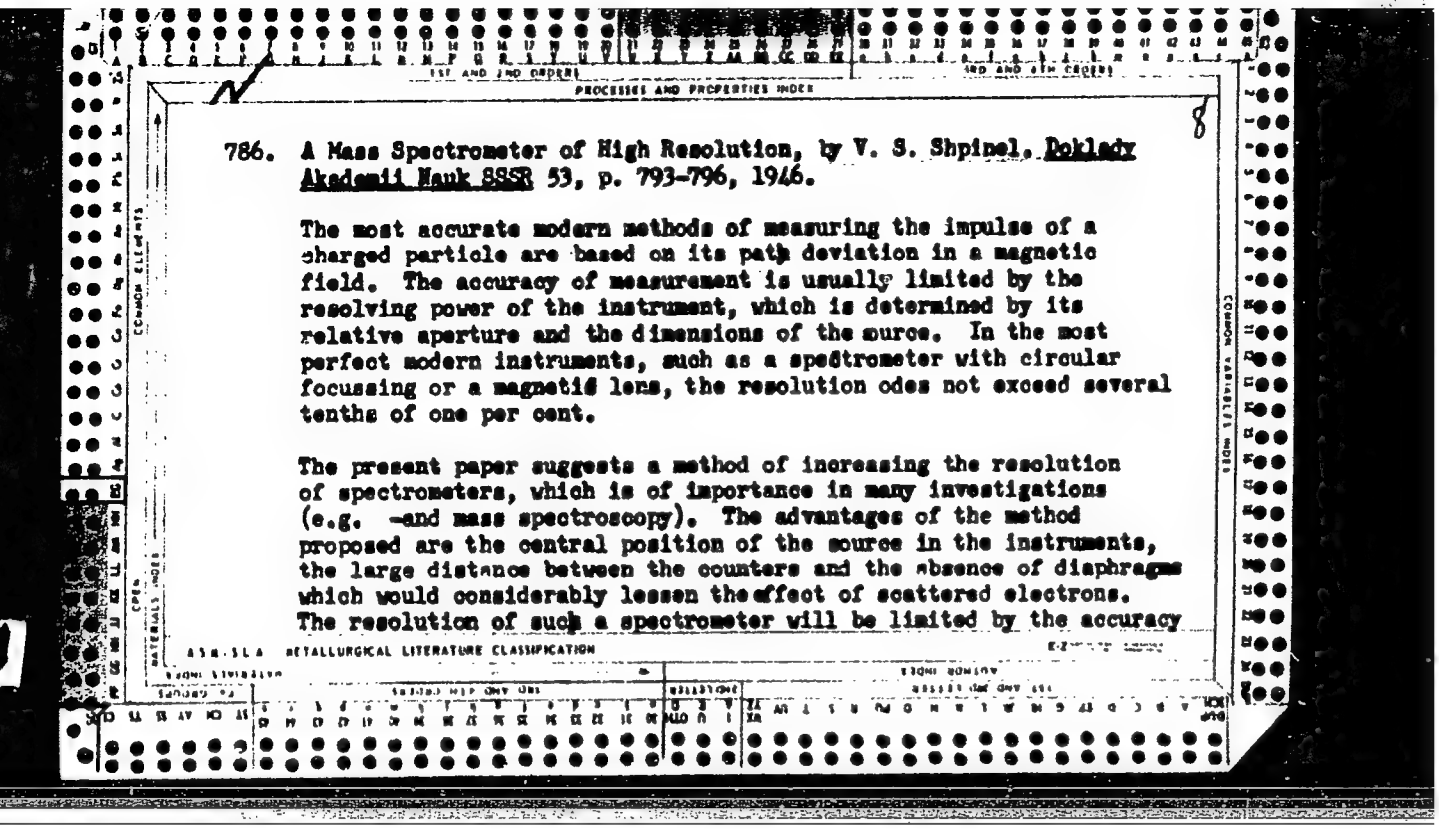
"A Study of the Operation of Geiger-Mueller Counters Under Intensive Radiation from an Impulse Source," F. F. Lange, V. S. Shpinel', M. I. Korsunskiy, 8 pp

"Zhur Eksp i Teor Fiz" Vol XVI, No 11

Investigation of combined operation of an impulse set and of Geiger-Mueller counters, showing that under conditions of intensive impulse x-ray radiation falling on the counter the installation is capable of measuring short-period activities as low as 5.10^{-4}-10^{-3} sec.

PA 13T54

Physical Tech. Inst., Acad. Sci. Urkrainian SSR, -1946-.



PROCESSES AND PROPERTIES INDEX

786. A Mass Spectrometer of High Resolution, by V. S. Shpinel, Doklady Akademii Nauk SSSR 53, p. 793-796, 1946.

The most accurate modern methods of measuring the impulse of a charged particle are based on its path deviation in a magnetic field. The accuracy of measurement is usually limited by the resolving power of the instrument, which is determined by its relative aperture and the dimensions of the source. In the most perfect modern instruments, such as a spectrometer with circular focussing or a magnetic lens, the resolution does not exceed several tenths of one per cent.

The present paper suggests a method of increasing the resolution of spectrometers, which is of importance in many investigations (e.g. -and mass spectroscopy). The advantages of the method proposed are the central position of the source in the instruments, the large distance between the counters and the absence of diaphragms which would considerably lessen the effect of scattered electrons. The resolution of such a spectrometer will be limited by the accuracy

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

attainable in the production of the axially symmetrical field.

PA 164T66

SHPINEL', V. S.

USSR/Physics - Spectrometer
Electron Microscope
Jul 50

"Magnetic Spectrometer of Great Resolving Power for the Electron Microscope," V. S. Shpinel', Moscow State U imeni Lomonosov

"Zhur Tekh Fiz" Vol XX, No 7, pp 834-846

Constructed and tested subject spectrometer with cross-sectional magnetic field of axial symmetry. Electrons emitted by source in field's center are collected to maximum orbit where recording apparatus is located (G-M counter or one operating on coincidence.) Spectrometer gives a half width of

164T66

USSR/Physics - Spectrometer (Contd)
Jul 50

the conversion line of 0.5% when a solid angle about 3.10^{-3} of a full solid angle is used. Submitted 29 Apr 49.

164T66

PA 165T49

SHPINEL', V. S.

USSR/Nuclear Physics - Conversion
Thorium

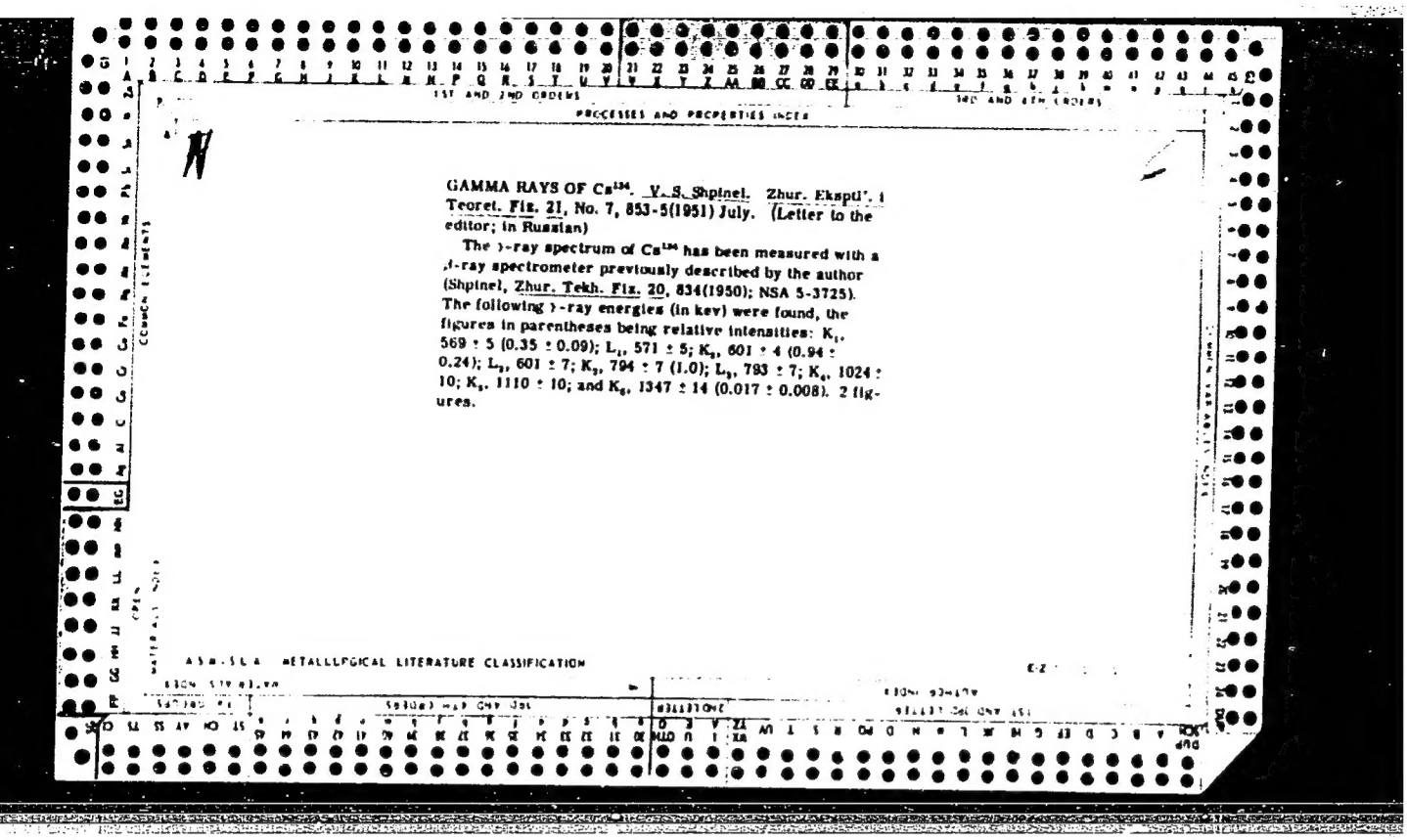
1 May 50

"Conversion on the Subgroups of the L-Shell," V. S. Shpinel', N. V. Forafontov, Moscow State U imeni M. V. Lomonosov

"Dok Ak Nauk SSSR" Vol LXXII, No 1, pp 49-52

Attempts to solve problem of measuring ratio of coefficients of conversions on subgroups of L-shell for gamma-transition of 238 kev in ThC nucleus. Submitted 3 Mar 50 by Acad D. V. Skobel'tsyn.

165T49



GAMMA RAYS OF Cs^{134}. V. S. Shpinel. Zhur. Eksptl'. i Teoret. Fiz. 21, No. 7, 853-5(1951) July. (Letter to the editor; in Russian)

The γ-ray spectrum of Cs^{134} has been measured with a β-ray spectrometer previously described by the author (Shpinel, Zhur. Tekh. Fiz. 20, 834(1950); NSA 5-3725). The following γ-ray energies (in kev) were found, the figures in parentheses being relative intensities: K_1, 569 ± 5 (0.35 ± 0.09); L_1, 571 ± 5; K_2, 601 ± 4 (0.94 ± 0.24); L_2, 601 ± 7; K_3, 794 ± 7 (1.0); L_3, 793 ± 7; K_4, 1024 ± 10; K_5, 1110 ± 10; and K_6, 1347 ± 14 (0.017 ± 0.008). 2 figures.

SHPINEL, V. S.

Fa 197T95

USSR/Nuclear Physics - Conversion Electrons Oct 51

"Width of Gamma Lines and Doppler Widening of Lines of Conversion Electrons," V. S. Shpinel, R. I. Moshkina, Moscow State U

"Zhur Eksper i Teoret Fiz" Vol XXI, No 10, pp 1127-1131

Precise beta spectrometer with transversal non-uniform field of axial symmetry was used for measurement of conversion line, produced by gamma transition of hv = 287 kev in ThC" nucleus, re-coiling because of preceding alpha decay. Expected widening of conversion line did not appear. 197T95

LC

USSR/Nuclear Physics - Conversion Electrons (Contd) Oct 51

This data was used for evaluation of life of excited ThC" nucleus. Authors acknowledges Prof L. V. Groshev's helpful discussion. Submitted 12 Oct 50.

(CA 47 no. 21: 11020 '53)

LC

197T95

USSR/Nuclear Physics - Radioactive Transitions Dec 51

"A Series of Successive Radioactive Transitions $Zr^{95} \rightarrow Nb^{95} \rightarrow Mo^{95}$," V.S. Shpinel, Moscow State U

"Zhur Eksper i Teoret Fiz" Vol XXI No 12, pp 1370-1375

Performed radiation study of a series of successive transitions $Zr^{95} \rightarrow Nb^{95} \rightarrow Mo^{95}$ with beta-spectrometer with thin magnetic lens. Beta-spectrum of Zr^{95} is complex with upper limit of 365 ± 10 KeV and 95% intensity and contains 2 lower intensity spectra ~600 and 1,100 keV. Beta-spectrum of Nb^{95} is simple

198T91

USSR/Nuclear Physics - Radioactive Transitions (Contd) Dec 51

SHPINEL, V. S

with upper limit 148 ± 5 keV; a weak conversion peak from isomeric transition of Nb^{95} of 240 KeV is noticeable. Gamma-radiations emitted by Zr^{95} and Nb^{95} have nearly equal energy of 730-750 keV. Plots probable decay scheme of these elements. Submitted 10 Feb 51.

198T91